System and Method for Concurrent WLAN and WPAN Wireless Modes From a Single Device

ABSTRACT

A system and method for concurrent WLAN and WPAN wireless modes from a single device is presented. A client uses a Wi-Fi device's infrastructure mode to communicate in a WLAN environment and, during idle WLAN times, uses the Wi-Fi device's adhoc mode to communicate in a WPAN environment. The Wi-Fi device uses a watchdog timer to switch between infrastructure mode and adhoc mode. When the client's Wi-Fi device switches to infrastructure mode, the client's Wi-Fi device uses an infrastructure register and an infrastructure device driver to transfer data over the WLAN environment. Likewise, when the client's Wi-Fi device switches to adhoc mode, the client's Wi-Fi device uses an adhoc register and an adhoc device driver to transfer data over the WLAN environment. The client uses a code shim to act as a virtual device driver at times when either the infrastructure device driver or the adhoc device driver is inactive.